

Mineral Industry Surveys

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COBALT IN OCTOBER 2006

U.S. cobalt consumption during January through October 2006 was slightly lower than that consumed during the first 10 months of 2005, according to the U.S. Geological Survey.

The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 8% higher in January through September 2006 than that imported during the same period in 2005. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 16% higher in January through September 2006 than that exported during the same period in 2005.

Update

Prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
November 16	17.50-18.25
November 23	20.00-25.00
November 30	28.00-31.00
December 7	27.00-29.00

<u>Month</u>	<u>Average price</u>
November	20.36

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2005:				
October	318	154	172	644
November	310	146	174	630
December	312	147	164	622
January-October ^r	3,170	1,560	1,690	6,410
January-December ⁴	3,790	1,850	2,020	7,660
Year ⁵	4,550	1,860	2,030	8,430
2006:				
January	323	149	173	646
February	316	151	167	633
March	320	153	172	645
April	298	146	175	619
May	314	161	180	655
June	309	156	168	633
July	304	148	161	613
August	308	158	179	644
September	298	151 ^r	179	628 ^r
October	301	155	179	635
January-October	3,090	1,530	1,730	6,350

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

⁵Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2005			2006	
	January- October ^r	January- December ²	Year ³	October	January- October ⁴
Steel	596	714	857	57	571
Superalloys	3,000	3,590	4,140	300	3,020
Magnetic alloys	238	287	337	25	246
Other alloys ⁵	W	W	227	W	W
Cemented carbides ⁶	634	761	763	61	608
Chemical and ceramic uses ⁷	1,710	2,040	2,040	170	1,680
Miscellaneous and unspecified	228	272	63	23	228
Total	6,410	7,660	8,430	635	6,350

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³Includes annual reports.

⁴Includes revisions to prior months' data.

⁵Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁶Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁷Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²			Total	U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap		
2005:					
October	308	191	78	577	1,670
November	294	192	64	549	1,560
December ⁶	296	189	70	555	1,550
Yearend ⁷	383	209	72	664	1,550
2006:					
January	311	187	80	578	1,520
February	321	183	81	585	1,500
March	335	176	84	595	1,480
April	339	173	74	586	1,480
May	334	183	57	574	1,480
June	340	170	65	575	1,480
July	336	169	69	573	1,470
August	328	167	65	560	1,470
September	327	183 ^r	65	575 ^r	1,470
October	316	174	65	554	1,420

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

⁷Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2005:								
September	846,000	\$26,800,000	113,000	\$2,770,000	167,000	\$1,400,000	980,000	8,380,000
October	846,000	26,500,000	111,000	2,610,000	237,000	2,640,000	1,010,000	9,390,000
November	971,000	28,300,000	116,000	2,790,000	158,000	1,840,000	1,120,000	10,500,000
December	379,000	11,000,000	108,000	2,380,000	271,000	2,850,000	555,000	11,100,000
January-September	7,160,000	247,000,000	975,000	27,400,000	1,530,000	17,400,000	8,380,000	XX
January-December	9,350,000	312,000,000	1,310,000	35,100,000	2,200,000	24,800,000	11,100,000	XX
2006:								
January	906,000	25,000,000	79,300	1,890,000	245,000	2,830,000	1,060,000	1,060,000
February	571,000	15,600,000	102,000	2,200,000	317,000	3,720,000	775,000	1,830,000
March	1,160,000	30,300,000	115,000	2,620,000	196,000	2,230,000	1,320,000	3,150,000
April	942,000	26,500,000	121,000	2,850,000	165,000	1,640,000	1,090,000	4,240,000
May	640,000	19,300,000	102,000	2,360,000	195,000	2,450,000	790,000	5,030,000
June	969,000	29,500,000	42,700	1,220,000	278,000	2,310,000	1,080,000	6,110,000
July	741,000	21,800,000	85,500	2,230,000	286,000	3,030,000	900,000	7,010,000
August	694,000	21,300,000	91,700	2,260,000	217,000	1,850,000	825,000	7,840,000
September:								
Australia	134,000	4,240,000	--	--	--	--	134,000	412,000
Belgium	11,000	383,000	22,500	740,000	--	--	27,200	412,000
Brazil	34,000	1,010,000	--	--	--	--	34,000	210,000
Canada	64,800	2,320,000	--	--	--	--	64,800	752,000
China	93,100	2,690,000	39,400	890,000	2,650	27,400	122,000	988,000
Congo (Kinshasa)	--	--	--	--	--	--	--	31,000
Cote d'Ivoire	--	--	--	--	--	--	--	2,590
Finland	85,100	2,680,000	29,300	715,000	34,000	334,000	117,000	723,000
France	307	24,800	3,230	117,000	--	--	2,640	30,700
Germany	1,030	97,700	--	--	--	--	1,030	18,200
India	--	--	--	--	16,200	106,000	4,370	105,000
Italy	--	--	9	2,920	335	4,190	87	348
Japan	10,000	309,000	128	3,830	--	--	10,100	120,000
Korea, Republic of	12	6,730	--	--	16,900	134,000	4,070	5,030
Kyrgyzstan	--	--	--	--	--	--	--	736
Morocco	8,000	252,000	--	--	--	--	8,000	227,000
Norway	194,000	6,260,000	--	--	--	--	194,000	1,830,000
Philippines	--	--	--	--	--	--	--	19,500
Russia	352,000	11,900,000	--	--	--	--	352,000	2,050,000
South Africa	20,500	686,000	--	--	--	--	20,500	122,000
Sweden	--	--	--	--	--	--	--	2,180
Switzerland	--	--	--	--	--	--	--	47
Taiwan	--	--	--	--	--	--	--	360
Uganda	21,600	660,000	--	--	--	--	21,600	111,000
United Kingdom	1,850	67,200	10,800	299,000	13,500	268,000	15,800	163,000
Zambia	80,000	2,530,000	--	--	--	--	80,000	716,000
Total	1,110,000	36,100,000	105,000	2,770,000	83,600	874,000	1,210,000	9,050,000
January-September	7,740,000	225,000,000	845,000	20,400,000	1,980,000	20,900,000	9,050,000	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2005:						
September	23,500	\$711,000	42,700	\$495,000	18,300	\$1,150,000
October	10,700	372,000	88,200	594,000	18,700	1,520,000
November	10,100	410,000	100,000	1,090,000	36,900	2,190,000
December	35,200	350,000	53,600	363,000	21,700	1,510,000
January-September	45,200	1,550,000	572,000	5,830,000	179,000	12,500,000
January-December	101,000	2,690,000	815,000	7,880,000	256,000	17,700,000
2006:						
January	385	14,000	59,800	1,090,000	14,600	1,140,000
February	1,380	53,700	68,200	441,000	12,700	1,080,000
March	1,570	74,900	55,200	731,000	25,100	1,940,000
April	1,050	60,800	29,000	421,000	26,700	1,820,000
May	864	78,800	26,800	450,000	23,600	1,690,000
June	233	19,300	149,000	1,780,000	23,300	1,680,000
July	1,950	26,400	47,900	519,000	23,700	1,920,000
August	21,200	675,000	51,300	708,000	18,300	1,470,000
September:						
Canada	--	--	6,710	126,000	2,700	439,000
China	--	--	--	--	528	52,600
France	--	--	--	--	2,810	266,000
Germany	404	37,100	--	--	512	117,000
Ireland	--	--	12,100	191,000	--	--
Japan	--	--	--	--	3,200	102,000
Korea, South	--	--	8,250	120,000	--	--
Mexico	--	--	1,390	21,200	--	--
Switzerland	43	2,660	--	--	1	10,400
United Kingdom	--	--	26,000	219,000	4,460	372,000
Total	447	39,700	54,400	677,000	14,200	1,360,000
January-September	29,100	1,040,000	542,000	6,810,000	182,000	14,100,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5,6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2005:								
September	108,000	\$4,050,000	154,000	\$1,780,000	30,400	\$229,000	226,000	1,890,000
October	147,000	6,240,000	68,000	1,610,000	18,400	119,000	201,000	2,090,000
November	103,000	4,030,000	57,700	1,480,000	88,900	390,000	166,000	2,260,000
December	90,100	3,130,000	110,000	2,410,000	49,200	275,000	181,000	2,440,000
January-September	1,330,000	47,200,000	594,000	11,600,000	547,000	3,040,000	1,890,000	XX
January-December	1,670,000	60,600,000	829,000	17,100,000	704,000	3,820,000	2,440,000	XX
2006:								
January	96,100	3,850,000	108,000	2,610,000	51,500	317,000	187,000	187,000
February	96,200	3,960,000	91,800	2,170,000	43,400	308,000	173,000	359,000
March	232,000	9,530,000	93,800	2,030,000	76,300	518,000	318,000	678,000
April	326,000	12,700,000	123,000	2,710,000	19,900	177,000	419,000	1,100,000
May	134,000	4,780,000	83,300	2,060,000	79,800	461,000	213,000	1,310,000
June	157,000	3,980,000	66,000	1,680,000	50,300	111,000	217,000	1,530,000
July	150,000	4,890,000	63,300	1,370,000	33,200	224,000	203,000	1,730,000
August	130,000	3,650,000	91,000	2,180,000	64,900	390,000	211,000	1,940,000
September	165,000	4,500,000	109,000	3,010,000	20,900	163,000	249,000	2,190,000
January-September	1,490,000	51,900,000	829,000	19,800,000	440,000	2,670,000	2,190,000	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES¹

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2005:				
September	147,000	\$6,370,000	139,000	\$1,720,000
October	222,000	8,360,000	41,800	1,050,000
November	216,000	8,370,000	--	--
December	204,000	8,800,000	69,200	562,000
January-September	1,690,000	66,300,000	618,000	10,500,000
January-December	2,340,000	91,800,000	729,000	12,100,000
2006:				
January	188,000	7,160,000	5,150	129,000
February	157,000	7,530,000	6,390	139,000
March	219,000	8,340,000	28,000	893,000
April	183,000	8,250,000	69,200	1,170,000
May	115,000	5,260,000	19,700	493,000
June	112,000	6,110,000	31,800	423,000
July	130,000	7,020,000	81,200	1,320,000
August	140,000	6,350,000	6,690	162,000
September	165,000	8,040,000	107,000	585,000
January-September	1,410,000	64,100,000	355,000	5,310,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.